2 November 2014 - The UN's Intergovernmental Panel on Climate Change (IPCC) has today released the final synthesis report for its Fifth Assessment Report on the current scientific knowledge around our changing climate.

Distilling and integrating material from the three Working Group reports on the science, impacts and mitigation of climate change, the Synthesis Report will be a vital document for policymakers.

Hundreds of leading scientists, including many from the Met Office, and thousands of expert reviewers have been involved in compiling the Fifth Assessment Report (AR5), and this final report marks the end of the process.

The Synthesis Report is available to download from the IPCC's website .

While it is already well established that increasing concentrations of greenhouse gases from human emissions have been contributing to global temperature rise, the report focuses on how much warming we may see, where it will warm fastest and what the implications are for people all over the world.

Key conclusions include:

- There is more confidence than ever before that the world is warming because we can see changes across our climate system - including temperatures, sea level rise, shrinking glaciers and reducing Arctic sea ice;
- There is mounting evidence that human activity has altered extremes of weather and will cause further changes in the future;
- Climate change is having an impact on the natural world and we expect those impacts to become greater in future - with species changing locations and responding to changes in seasons;
- Concentrations of carbon dioxide in the atmosphere have risen by more than 40% since pre-industrial times, and manmade greenhouse gas emissions continue to rise;
- It is inevitable that we will see some further warming, but reducing greenhouse gas emissions would substantially reduce the risks of climate change later this century.

Professor Dame Julia Slingo, Chief Scientist at the Met Office, said: "This important report from the IPCC provides a science basis for global policymakers to make key decisions in the coming months and years.

"The next challenge for climate science is to accelerate our understanding of regional and local impacts to help society manage the risks associated with future climate changes and weather extremes.

"This will involve using advances in supercomputing to understand better how the climate system will continue to change both in the UK and around the world. By doing this we can provide a solid evidence base to ensure UK investment decisions, and our future prosperity, remain resilient to future climate risk."

Last updated: 31 October 2014